

703290 * 06046350

202
1
200
1
204
1

Index		Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201	000201	A	1	46	ABC			
A	2	000202	000202	A	2	54	LMN			
B	3	000203	000203	B	3	23	QWP			
			000204							

FIG 2(A) (Prior Art)

202
1
212
1
200
1
204
1

Index		Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X
A	2	000202 D	000202	A	2	54	LMN	X	000202	X
B	3	000203	000203	B	3	23	QWP		000204	210
			000204							

FIG 2(B) (Prior Art)

202
1
212
1
200
1
204
1

Index		Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X
A	2	000202 D	000202	A	2	54	LMN	X	000202	X
B	3	000203	000203	B	3	23	QWP		000204	210
			000204	A	1	86	NEW	X		

FIG 2(C) (Prior Art)

202
1
212
1
200
1
204
1

Index		Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X
A	2	000202 D	000202	A	2	54	LMN	X	000202	X
B	3	000203	000203	B	3	23	QWP		000204	210
			000204	A	1	86	NEW	X		

FIG 2(D) (Prior Art)

Index

C1	C2	RID
A	1	000204
A	2	000202 D
B	3	000203

Data Table

RID	C1	C2	C3	C4	Locks
000201			~226		
000202					
000203	B	3	23	QWP	
000204	A	1	86	NEW	X

Lock Table

RID	Lock Attributes Transaction
000204	X Insert Trans.

FIG 2(E) (Prior Art)

Index

C1	C2	RID
A	1	000204
A	2	000202 D
B	3	000203

Data Table

RID	C1	C2	C3	C4	Locks
000201			~226		
000202					
000203	B	3	23	QWP	
000204	A	1	86	NEW	X

Lock Table

RID	Lock Attributes Transaction
-----	-----------------------------

FIG 2(F) (Prior Art)

302

300

304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201	000201	A	1	46	ABC				
A	2	000202	000202	A	2	54	LMN				
B	3	000203	000203	B	3	23	QWP				
B	4	000204	000204	B	4	97	VED				

FIG 3(A) (Prior Art)

302

312

300

304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X	T1
A	2	000202 D	000202	A	2	54	LMN	X	000202	X	T1
B	3	000203 D	000203	B	3	23	QWP	X	000203	X	T2
B	4	000204 D	000204	B	4	97	VED	X	000204	X	T2

FIG 3(B) (Prior Art)

302

312

300

304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201								
A	2	000202 D	000202								
B	3	000203 D	000203								
B	4	000204 D	000204								

FIG 3(C) (Prior Art)

302

312

300

304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X			
B	4	000204 D	000204								

FIG 3(D) (Prior Art)

302
312
300
304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X	000201	S-lock in queue	T3
B	4	000204 D	000204								

FIG 3(E) (Prior Art)

302
312
300
304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X	000201	S-lock in queue	T3
B	4	000204 D	000204						000203	S-lock in queue	T4

FIG 3(F) (Prior Art)

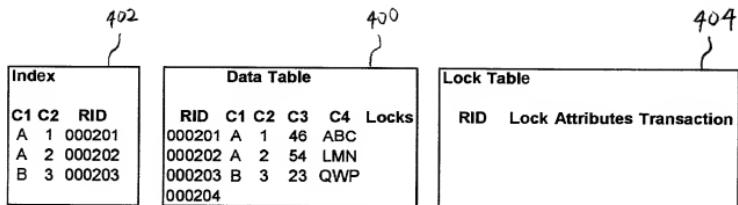


FIG 4(A)

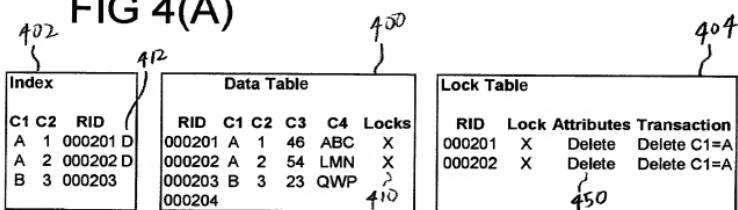


FIG 4(B)

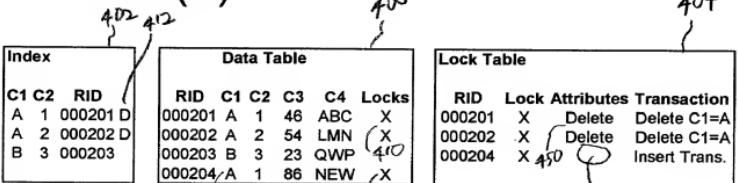


FIG 4(C)

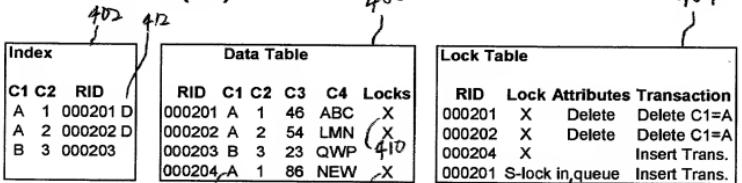


FIG 4(D)

Index

C1	C2	RID
A	1	000204
A	2	000202 D
B	3	000203 J

Data Table

RID	C1	C2	C3	C4	Locks
000201				~426	
000202					
000203	B	3	23	QWP	
000204	A	1	86	NEW	X

Lock Table

RID	Lock Attributes	Transaction
000204	X	Insert Trans.

FIG 4(E)

Index

C1	C2	RID
A	1	000204
A	2	000202 D
B	3	000203

Data Table

RID	C1	C2	C3	C4	Locks
000201				~426	
000202					
000203	B	3	23	QWP	
000204	A	1	86	NEW	

Lock Table

RID	Lock Attributes	Transaction

FIG 4(F)

502

500

504

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201	000201	A	1	46	ABC				
A	2	000202	000202	A	2	54	LMN				
B	3	000203	000203	B	3	23	QWP	X			
B	4	000204	000204	B	4	97	VED	X			

FIG 5(A)

502

512

500

504

510

550

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X	Delete T1
A	2	000202 D	000202	A	2	54	LMN	X	000202	X	Delete T1
B	3	000203 D	000203	B	3	23	QWP	X	000203	X	Delete T2
B	4	000204 D	000204	B	4	97	VED	X	000204	X	Delete T2

FIG 5(B)

502

512

500

504

514

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201								
A	2	000202 D	000202								
B	3	000203 D	000203								
B	4	000204 D	000204								

FIG 5(C)

502

512

500

504

518

516

522

520

552

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X			
B	4	000204 D	000204								

FIG 5(D)

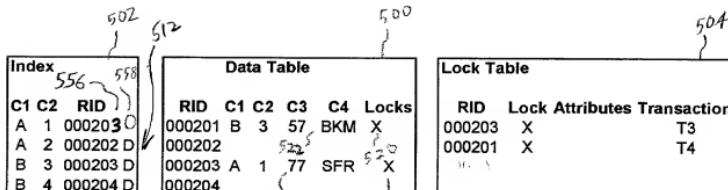


FIG 5(E)

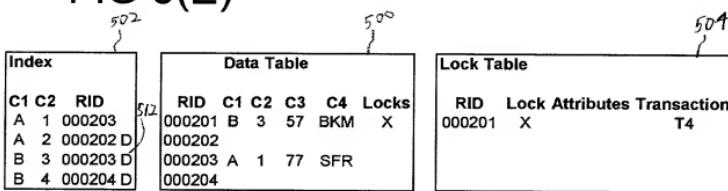


FIG 5(F)

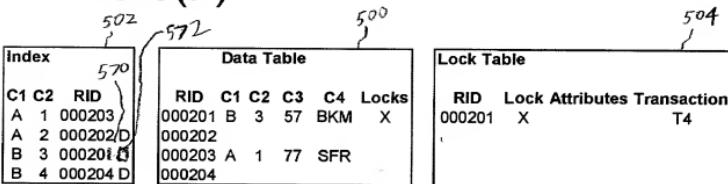


FIG 5(G)

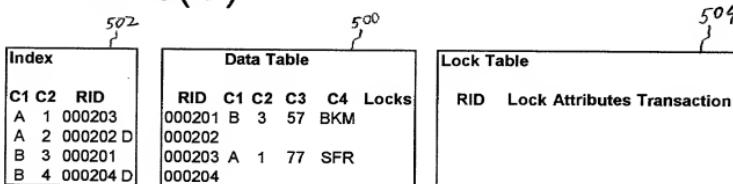
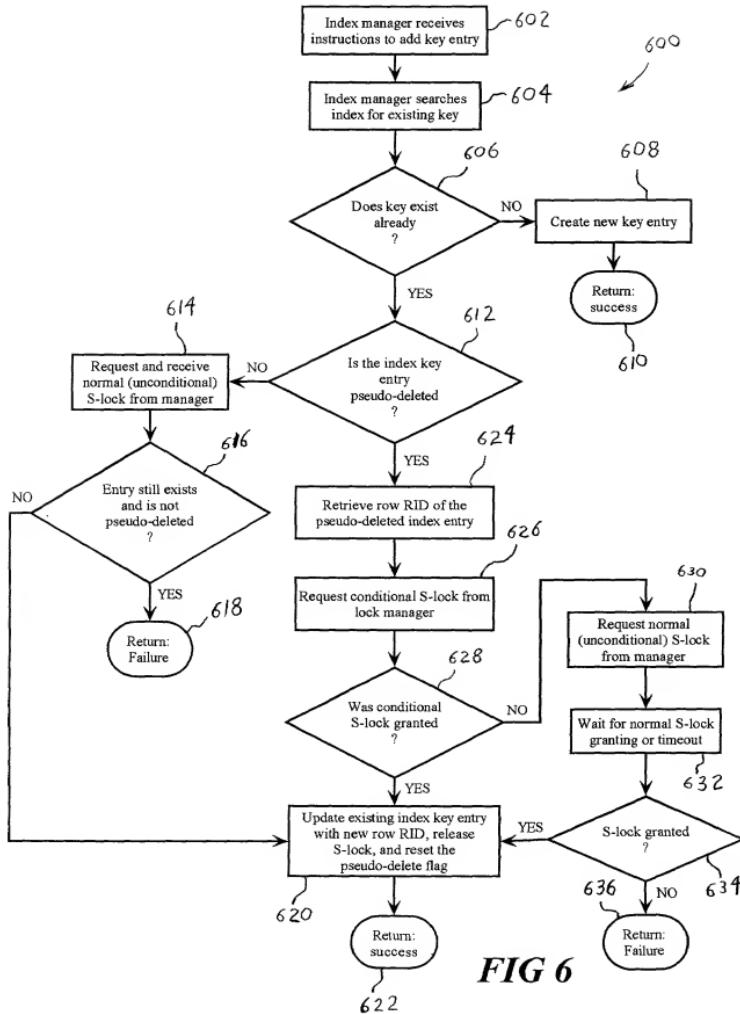


FIG 5(H)

**FIG 6**